

Notice of Allowability

Application No.

10/762,056

Examiner

Rip A. Lee

Applicant(s)

JENSEN ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to January 6, 2006.
2. ☒ The allowed claim(s) is/are 1-35.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 07-11-05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Election/Restrictions

1. Claims 1-31 are directed to an allowable product. Pursuant to the procedures set forth in MPEP § 821.04(b), claims 32-35, directed to the process of making or using the allowable product, previously withdrawn from consideration as a result of a restriction requirement, is hereby rejoined and fully examined for patentability under 37 CFR 1.104. Claims 36-38 are directed to inventions that do not require all the limitations of an allowable product claim, and therefore, claims 36-38 have NOT been rejoined.

Because a claimed invention previously withdrawn from consideration under 37 CFR 1.142 has been rejoined, the restriction requirement of group II, as set forth in the Office action mailed on July 18, 2005, is hereby withdrawn. In view of the withdrawal of the restriction requirement as to the rejoined inventions, applicant(s) are advised that if any claims including all the limitations of an allowable product claim or rejoined process claim are presented in a continuation or divisional application, such claims may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeffrey B. Arnold on March 14, 2006.

Cancel claims 36-38.

Allowable Subject Matter

3. The following is an examiner's statement of reasons for allowance: Claims 1-35 are allowed over the closest references cited below.

The present invention is drawn to a catalyst composition comprising a first metallocene, a second metallocene, at least one solid oxide treated with an electron withdrawing anion, and at least one organoaluminum. The first metallocene contains ligands (X^1) and (X^2) selected from monosubstituted Cp, monosubstituted Ind, monosubstituted Flu, or monosubstituted, partially saturated analogue thereof.

The second metallocene is (i) a zirconcene having ligands (X^5) and (X^6) selected from substituted Cp, Ind, Flu, or partially saturated analogues thereof wherein at least one of (X^5) and (X^6) is at least disubstituted, (ii) a zirconocene having ligands (X^5) and (X^6) selected from Cp, Ind, Flu, or partially saturated analogue thereof wherein (X^5) and (X^6) are connected by a bridging group comprising 3 to 5 contiguous ansa carbon atoms, or (iii) a hafnocene having ligands (X^5) and (X^6) selected from monosubstituted Cp, monosubstituted Ind, monosubstituted Flu, or monosubstituted, partially saturated analogue thereof.

Another aspect of the invention is a process for making said catalyst composition and a process of polymerizing olefins in the presence of said catalyst composition.

Jejelowo *et al.* (U.S. 5,422,325) and Bamberger *et al.* (U.S. 6,384,158) disclose catalyst compositions comprising a combination of metallocenes ($n\text{PrCp}$)₂ZrCl₂ and (1,2-/1,3-MeEtCp)₂ZrCl₂ supported on MAO treated silica and organoaluminum co-catalyst. The first metallocene has monosubstituted cyclopentadienyl ligands, and the second metallocene contains disubstituted cyclopentadienyl ligands. The reference does not teach use of solid oxide support treated with electron withdrawing anion.

Shamshoum *et al.* (U.S. 5,847,059) and Mehta *et al.* (U.S. 6,583,227) teach a catalyst composition comprising two bridged metallocenes supported on MAO treated silica and organoaluminum co-catalyst. The reference does not teach the claimed metallocene combination or use of a solid oxide support treated with electron withdrawing anion.

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Hawley *et al.* (U.S. 6,667,274), McDaniel *et al.* (U.S. 6,376,415), and McDaniel *et al.* (U.S. 6,833,338) teach a catalyst composition comprising at least one organometal component, at least one solid oxide treated with electron withdrawing anion, and at least one organoaluminum. An extensive listing of organometallic compounds is incorporated by reference, and representative structures are shown in the text. However, the claimed combination is neither taught with specificity nor made obvious from the teachings of the patent.

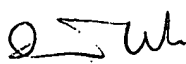
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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March 15, 2006


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